

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Reexamination of Roaming Obligations of)	WT Docket No. 05-265
Commercial Mobile Radio Service Providers)	

REPLY COMMENTS OF LEAP WIRELESS INTERNATIONAL, INC.

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January 26, 2005

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INTRODUCTION AND SUMMARY

Leap Wireless International, Inc. and its Cricket subsidiaries (collectively, “Leap”) respectfully reply to the comments submitted in response to the Notice of Proposed Rulemaking in the above-captioned docket.¹

The Commission should confirm that, consistent with the text and structure of the Communications Act,² Commercial Mobile Radio Service (“CMRS”) carriers have a statutory obligation to provide roaming service to other carriers on a just, reasonable, and non-discriminatory basis. Further, in light of the demonstrated problems in markets for wholesale roaming, the Commission should adopt certain rules to facilitates these common-carrier obligations. Most important, the Commission should prohibit a facilities-based carrier from

¹ Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, WT Docket No. 05-265, *Notice of Proposed Rulemaking*, FCC 05-160 (rel. Aug. 31, 2005), *summarized at* 70 Fed. Reg. 56,612 (Sept. 28, 2005).

² 47 U.S.C. §§ 151–615b.

demanding rates that exceed its average retail revenue per minute³ in a serving area—a harmful pricing practice for which there is no plausible competitive justification.

In their initial comments, the nationwide carriers disregard the plain meaning of several provisions in the Communications Act, fail to recognize the distinction between wholesale and retail markets, and evade any discussion of the unique conditions in wholesale markets that give nationwide carriers the incentive to adopt anticompetitive practices. The small, regional, and rural carriers have amply demonstrated that, under current market conditions, anticompetitive roaming and pricing practices are not only likely as a predictive matter—they are common. The nationwide carriers, in contrast, do not point to any facts that specifically pertain to the competitiveness of wholesale roaming markets, and, in any event, they fail to offer any plausible procompetitive explanation for charging wholesale rates that exceed comparable retail rates.

Leap’s proposals to address anticompetitive behavior with respect to roaming are not burdensome and are straightforward to administer. They in large part reflect the obligations that Congress has already imposed upon common carriers and, in remaining part, are designed to prohibit pricing practices that are *per se* unreasonable—rules that the Commission is clearly authorized to implement under 47 U.S.C. § 201(b).⁴ The nationwide carriers’ concern that such minimally intrusive steps would eliminate the incentive of large carriers to continue developing their networks is unfounded. A cap on wholesale roaming rates based upon a carrier’s average retail rates, for example, would allow the providing carrier to obtain healthy profits while insuring that customers of small, regional, and rural carriers can use their mobile wireless

³ As we explained in our initial comments, this figure can be calculated by dividing a carrier’s estimated average revenue per unit (“ARPU”) by the estimated minutes of use per customer. Leap Comments at 19–20.

⁴ “The Commission may prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this chapter.” 47 U.S.C. § 201(b).

services when such customers must travel outside their home areas. The providing carrier would not incur significant customer acquisition or care costs, resulting in a higher profit margin compared to its retail business.

In short, the measures that Leap and other small and regional carriers propose would not harm competition, as the nationwide carriers suggest, but would instead likely stimulate innovation and benefit consumers by increasing the choices available to them and by limiting large carriers' abuse of market power. Moreover, the proposed rules are easy to enforce and do not require excessive intervention by the Commission.

DISCUSSION

I. THE COMMISSION SHOULD CONFIRM THE STATUTORY OBLIGATIONS OF CMRS CARRIERS AS COMMON CARRIERS PROVIDING COMMUNICATIONS SERVICES

In evaluating whether CMRS carriers must provide wholesale roaming services to other carriers on a just, reasonable, and non-discriminatory basis, the Commission should start its analysis with the relevant provisions in the Communication Act. Section 201(a) of Title 47 requires a common carrier to furnish communications services upon reasonable request;⁵ section 201(b) prohibits unjust and unreasonable "charges, practices, and regulations for and in connection with such communications service"; and section 202(a) prohibits common carriers from unjustly and unreasonably discriminating in the provision of communications services. In light of the manifest intent of Congress reflected in these provisions, there remain only two questions for the Commission to consider: (1) Are CMRS carriers "common carriers"? And (2) Are roaming services "communications services"?

⁵ "It shall be the duty of every common carrier engaged in interstate or foreign communication by wire or radio to furnish such communication service upon reasonable request therefore." 47 U.S.C. § 201(a).

Congress has definitively answered both questions. Section 332(c)(1)(A) provides that a “person engaged in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier,”⁶ and subsection (c)(1)(B) states that, “[u]pon reasonable request of any person providing commercial mobile service, the Commission shall order a common carrier to establish physical connections with such service pursuant to the provisions of section 201 of this title.” The Commission itself has confirmed that roaming is a common carrier service.⁷ Considering that Congress has unambiguously answered the specific questions at issue, it is not for the Commission to decide in the first instance whether to impose an automatic roaming obligation.⁸ Such an obligation exists, and should be codified by the Commission in its rules.

In arguing against an automatic roaming rule, the nationwide carriers presume, based on statements the Commission made in a previous proceeding, that it is the burden of small, regional, and rural carriers to demonstrate that “market forces alone are not sufficient to ensure the widespread availability of competitive roaming services” or that “providers’ current practices are unreasonably hindering the operation of the market to the detriment of consumers.”⁹ That approach, however, disregards the unambiguous intent of Congress and impermissibly shifts the

⁶ 47 U.S.C. § 332(c)(1)(A).

⁷ See, e.g., Automatic and Manual Roaming Obligations Pertaining to Commercial Mobile Radio Services, WT Docket No. 00-193, *Notice of Proposed Rulemaking*, 15 FCC Rcd 21628, ¶ 15 (2000) (“2000 CMRS Roaming NPRM”) (“roaming is a common carrier service because [it] gives end users access to a foreign network in order to communicate messages of their own choosing,” and therefore “the provision of roaming is subject to the requirements of [47 U.S.C. §§] 201(b), 202(a), and 332(c)(1)(B)”).

⁸ “If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Chevron USA, Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 842–43 (1984).

⁹ 2000 CMRS Roaming NPRM, 15 FCC Rcd. at 21635–36, ¶¶ 16, 18; see also Cingular Comments at 10, 18; T-Mobile Comments at 13; Verizon Comments at ii.

burden to carriers seeking recognition and enforcement of their statutory rights. The Commission must apply the common carrier provisions discussed above unless it determines that all the factors for forbearance under 47 U.S.C. § 160(a)¹⁰ are met—but the Commission has not made or even contemplated such a determination here.¹¹ Therefore, the Commission is compelled to apply sections 201, 202, and 332 according to their plain meaning and to confirm that all CMRS carriers must provide roaming services to other carriers upon reasonable request and on a just, reasonable, and non-discriminatory basis.¹²

¹⁰ 47 U.S.C. § 160(a) states:

Notwithstanding section 332 (c)(1)(A) of this title, the Commission shall forbear from applying any regulation or any provision of this chapter to a telecommunications carrier or telecommunications service, or class of telecommunications carriers or telecommunications services, in any or some of its or their geographic markets, if the Commission determines that—

(1) enforcement of such regulation or provision is not necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory;

(2) enforcement of such regulation or provision is not necessary for the protection of consumers; and

(3) forbearance from applying such provision or regulation is consistent with the public interest.

¹¹ The Commission has forborne from imposing many Title II obligations on CMRS carriers, *see, e.g.*, Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Second Report & Order*, 9 FCC Rcd 1411, 1418–19, ¶ 16 (forbearing from, *inter alia*, tariff requirements of 47 U.S.C. § 203); *see also* 47 C.F.R. § 20.15 (listing provisions of Title II that do not apply to CMRS providers), but it has appropriately not forborne from §§ 201 or 202, which “codif[y] the bedrock consumer protection obligations of a common carrier” and which “have represented the core concepts of federal common carrier regulation dating back over a hundred years.” Personal Communication Industry Association’s Broadband Personal Communications Service Alliance’s Petition for Forbearance for Broadband Personal Communications Services, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 13 FCC Rcd 16857, 16865, ¶ 14 (1998).

¹² This analysis applies in full to facilities-based competitors (so-called “in-market” or “home roaming” competitors). Congress has not provided an exemption from the common carrier
(footnote continued on next page)

II. THE COMMISSION SHOULD ADOPT THE RULES LEAP PROPOSES IN ORDER TO FACILITATE ENFORCEMENT OF THE COMMON CARRIER OBLIGATIONS AND TO PROMOTE COMPETITION

In addition to confirming the statutory obligation of CMRS carriers to provide automatic roaming service to other carriers on a just, reasonable, and non-discriminatory basis, Leap urges the Commission to adopt several rules that a number of carriers have proposed in this proceeding that would ensure that all CMRS providers uphold these common carrier obligations.

Specifically, Leap urges the Commission to adopt the following rules, which would promote competition and benefit consumers:

- CMRS providers must negotiate in good faith in response to another carrier's request for automatic roaming.¹³ Leap believes that good faith negotiation is implicit in a carrier's obligation to provide roaming upon request under § 201.
- Although a CMRS carrier need not provide roaming where it is technologically infeasible to do so, there should be a presumption that a CMRS provider can offer roaming service to another carrier that uses the same technological format if the providing carrier already offers roaming service to others.¹⁴
- Complaints alleging unjust, unreasonable, or discriminatory treatment should be addressed in a prompt and expeditious manner. Therefore, the Commission should resolve these complaints through the Enforcement Bureau's Accelerated Docket under Section 1.730 of the Commission's Rules.¹⁵
- Leap agrees that the necessary information should be made available so that the Commission and the industry can assess whether certain carriers are violating their common carrier obligations.¹⁶ Leap therefore encourages the Commission to adopt automatic discovery procedures in the complaint process and to vigorously monitor conditions in wholesale roaming markets.

obligations of 47 U.S.C. §§ 201, 202, and 332 for facilities-based competitors, and the Commission has not determined that forbearance would be justified.

¹³ See NY3G Partnership Comments at 4; Rural Cellular Association Comments at 4; SouthernLINC Comments at 46, 53–54.

¹⁴ See SouthernLINC Comments at 52; MetroPCS Comments at 23–24.

¹⁵ See 47 C.F.R. § 1.730; see also ACS Wireless Comments at 6–7; SAFE Coalition Comments at 5; SouthernLINC Comments at 50–51.

¹⁶ See MetroPCS Comments at 26–27; NY3G Partnership Comments at 4.

- Finally, and most importantly, the Commission should adopt a *per se* rule prohibiting providers from charging carriers seeking to purchase wholesale roaming services more than the providers charge their own retail customers for comparable service in the same area—at least where there are three or fewer facilities-based CMRS providers from which the carrier seeking automatic roaming service could obtain such service.

These rules are necessary because, under current wholesale market conditions, large carriers will likely act to foreclose entry by small, regional, and rural carriers. That prediction is not just based on current economic learning—it has been confirmed by the experiences of small, regional, and rural carriers.

For instance, the Rural Telecommunications Group (“RTG”) reports that “small rural carriers have experienced a spike in the cost for their customers to roam on the nationwide carriers’ networks and an increased unwillingness by the national carriers to enter into roaming agreements or renew existing ones.”¹⁷ In one example that RTG describes, Verizon Wireless reportedly “removed a rural carrier’s system identification number ... from its preferred roaming list ... after the rural carrier would not drop its rates fast enough.”¹⁸ RTG cites another example from the Midwest, where a rural carrier was reportedly “cutoff from roaming with a regional competitor for no other apparent reason than the rural carrier happened to be a competitor.”¹⁹ And Both Airpeak and SouthernLINC describe in their comments the difficulties they have had obtaining roaming agreements from Sprint/Nextel and Nextel Partners.²⁰

¹⁷ RTG Comments at 10.

¹⁸ *Id.* at 12.

¹⁹ *Id.*

²⁰ *See* Airpeak Comments at 6–8; SouthernLINC Comments at 11–15.

A. Wholesale Roaming Markets are Not Fully Competitive

Several nationwide carriers point to the competitiveness of the retail market for nationwide mobile wireless coverage and cite the Commission's findings to support their view that no intervention is necessary.²¹ As Leap explained in its initial comments, however, the state of the *retail* market does not aid the Commission in deciding whether there is cause for concern in *wholesale* markets such that regulation is necessary to promote competition and, hence, to protect consumers. There are several characteristics of wholesale markets for roaming service on which the Commission should focus its evaluation, because a study of those characteristics shows that nationwide carriers have the incentive to adopt anticompetitive pricing practices.

As a preliminary matter, the nationwide carriers might contend that it is improper in this context to treat wholesale markets as distinct from retail markets, but economic theory and legal analysis teach that the distinction is important to understand the competitive effects of different policies or practices. The standard antitrust approach to defining a particular market, as set forth by the DOJ and the FTC in the *Horizontal Merger Guidelines*,²² is to examine whether a hypothetical monopolist could raise prices by a “small but significant and nontransitory” amount without expecting buyers to substitute a different product. In other words, if it is too costly for a buyer to respond to the price increase of a particular product by obtaining a different product from another source, then the relevant product market cannot include the other source or the alternative product. From this perspective, it is evident why wholesale and retail markets should be treated as distinct markets: The buyers in this circumstance—regional carriers seeking automatic roaming agreements—simply cannot substitute retail services for wholesale services.

²¹ See, e.g., Verizon Comments at 8; T-Mobile comments at 5; Cingular Comments at 11.

²² U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines*, reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,104, § 1.11 (1997) (“*Merger Guidelines*”).

Equally important in this setting, carriers seeking to offer their customers roaming services cannot enter into agreements with a carrier offering a technologically incompatible service; therefore, different technological service offerings (GSM, CDMA, and iDEN) should be considered distinct when evaluating wholesale markets for roaming.²³ For this reason, the fact that there may be a sufficient number of carriers offering mobile wireless service such that the *retail market* is competitive does *not* mean that *wholesale markets* for roaming are equally competitive.

In a report attached to these reply comments, Dr. David S. Sibley properly applies the market definition analysis set forth in the *Merger Guidelines* and shows that wholesale roaming markets are in fact regional and technology-specific.²⁴ Dr. Sibley explains why it would be improper to conclude that wholesale roaming markets must be competitive on the ground that retail markets are competitive, and he also identifies the flaws in the analysis of Dr. Gregory

²³ T-Mobile argues that “the ongoing developments of multi-band and multimode handsets with chipsets that can support multiple digital standards is removing technical impediments to roaming on networks with different technical standards such as GSM/GPRS and CDMA.” T-Mobile Comments at 20. As the ERS Group explained in its report attached to Leap’s initial filing, however, the dual-mode handsets that are presently available are designed for European markets and are not necessarily compatible with the technology in use in the United States. Besides, these phones can be considerably more expensive and do not yet present a viable alternative for carriers seeking an alternative roaming partner. See Leap Comments, Attachment A, ERS Group, *Wholesale Pricing Methods of Nationwide Carriers Providing Commercial Mobile Radio Service: An Economic Analysis*, at 8 n.11 (“ERS Report”). That dual-mode handsets are not a practical option is confirmed by the fact that Vodafone, a European GSM carrier, discourages its subscribers from using the CDMA network of its affiliate, Verizon, when roaming in the United States. See <http://www.vodafone-i.co.uk/abroad/ir/vfIntRoamingHome.do> (search USA) (last visited Jan. 24, 2005).

²⁴ See Attachment A, David S. Sibley, *The Existence of Regional, Technology-Specific Wholesale Antitrust Markets for Roaming Services* (“Sibley Report”), at 11–20.

Rosston, in his filing on behalf of Sprint/Nextel.²⁵ The ERS Group, in its further economic analysis of pricing practices in the CMRS industry (which is also attached to this reply), agrees with Dr. Sibley that, “in comparison to retail CMRS, wholesale roaming markets are constrained by technology because CMRS carriers—the direct purchasers of wholesale roaming services—cannot substitute service provided under one technological format in response to a small but significant and nontransitory increase in the price of roaming services using a different format.”²⁶

When wholesale roaming markets are properly viewed as separate from retail services markets, it becomes evident why:

- (1) increased consolidation and concentration in the CMRS market and
- (2) the effective duopoly within technological formats

are important to assessing the competitiveness of the wholesale market for roaming. For the reasons explained in Leap’s initial comments and attachments, these characteristics create the incentive for nationwide carriers to adopt anticompetitive pricing practices in an effort to squeeze out potential entrants—typically small, regional, and rural carriers. The concerns of market failure that Leap and other carriers identified in their initial comments are valid, and the Commission should intervene in order to promote its goal of fostering a “nationwide, ubiquitous, and competitive wireless voice telecommunications” environment.²⁷

²⁵ See Sprint/Nextel Comments, Gregory L. Rosston, *An Economic Analysis of How Competition Has Reduced High Roaming Charges* at 21–24 (“Rosston Report”).

²⁶ See Attachment B, ERS Group, *A Further Analysis of the Wholesale Pricing Methods of Nationwide Carriers Providing Commercial Mobile Radio Service*, at 5 (“ERS Further Analysis”).

²⁷ Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, CC Docket No. 94-54, *Second Report and Order and Third Notice of Proposed Rulemaking*, 11 FCC Rcd. 9462, 9464, ¶ 2 (Aug. 15, 1996) (addressing importance of roaming on broadband wireless networks); see also Automatic and Manual Roaming Obligations Pertaining to Commercial Mobile Radio Services, WT Docket No. 00-193, *Notice of Proposed Rulemaking*, 15 FCC Rcd. (footnote continued on next page)

As support for their contention that there is no competitive problem to be addressed in this proceeding, the nationwide carriers point out that roaming revenues are decreasing.²⁸ Standing alone, that fact is meaningless and does not bear on the competitiveness of any CMRS market, because it may be symptomatic of other changes in market conditions, including a greater concentration of market power—especially in wholesale markets—in the hands of the nationwide carriers. As the ERS Group explains, “[f]or purposes of assessing competitiveness ..., the more important fact is that the nationwide carriers charge unaffiliated carriers more than affiliated carriers and MVNOs, notwithstanding the fact that the services nationwide carriers provide these entities are comparable.”²⁹

Data from several carriers demonstrate that the rates that small, regional, and rural carriers are forced to pay exceeds a large carrier’s average retail rates in the same area.³⁰ The only possible explanation for this practice is that large carriers are abusing their market power to maintain a dominant position. Furthermore, as Leap explained in its initial comments, at least one carrier has abused the “in-market” or “home roaming” exclusion to accomplish the same end—that is, to foreclose roaming markets to potential competitors.³¹

21,628, ¶ 15 (Nov. 21, 2000) (“We affirm our conclusion ... that ubiquitous roaming on CMRS systems is important to the development of a seamless, nationwide ‘network of networks.’”).

²⁸ See, e.g., Cingular Comments at 11; Verizon Comments at 11; Sprint/Nextel Comments at 3.

²⁹ *ERS Further Analysis* at 9.

³⁰ See ERS Report at 10; NTCH Comments at 3 (reporting that one nationwide CDMA carrier charges NTCH \$0.50 per minute for roaming); RTG Comments at 10 (reporting that “[r]oaming rates paid by RTG and OPASTCO members to nationwide carriers range from \$0.35 to \$0.99 per minute”).

³¹ See Leap Comments at 15 (discussing the abuse of the “in-market” roaming exception by a large carrier); RTG Comments at 12 (reporting that, “[i]n many states, Verizon will not allow rural customers to roam in the ‘home’ state just outside their rural service areas”).

B. The Solution Is Minimally Intrusive and Easy to Enforce

Leap urges the Commission to respond to these problems by adopting an easily enforceable, minimally intrusive regulation that would target only clearly anticompetitive pricing practices. In addition to confirming and enforcing the common carrier obligations that Congress has imposed, the Commission should prohibit carriers from demanding rates for wholesale service that exceed the carrier's average retail rate in any particular area. A carrier's average revenue per unit serves as a reasonable proxy for the average retail rate and can be ascertained from publicly available information.

Nationwide carriers suggest in their initial comments that the existing enforcement methods under section 208 of the Act³² are adequate to ensure that the market is working effectively. The nationwide carriers go on to acknowledge, however, that section 208 proceedings are uncommon. The reason is not, as the nationwide carriers suggest, that there are few instances of anticompetitive pricing practices; rather, the section 208 complaint procedure is disfavored because the Commission has not taken any steps to define the obligations of carriers with respect to automatic roaming, and consequently, the process is cumbersome and uncertain. Furthermore, small, regional, and rural carriers have a legitimate concern of retaliation if they bring an enforcement action against one of the few carriers from whom they could obtain roaming service. The bright line rule that Leap proposes—a carrier cannot charge more for wholesale roaming than its average retail price for comparable service in the same area—would facilitate enforcement in section 208 proceedings and would be easy for the Commission to

³² See 47 U.S.C. § 208

monitor.³³ Further, as explained above, Leap urges the Commission to resolve complaints of unjust, unreasonable, or nondiscriminatory carrier conduct through the Enforcement Bureau's Accelerated Docket under Section 1.730 of the Commission's Rules.

The nationwide carriers' concern that an automatic roaming rule would eliminate the incentive of large carriers is unfounded. A proposed cap on wholesale roaming rates based upon the providing carrier's average retail rates, along the lines that Leap proposes, would allow the providing carrier to obtain healthy profits while insuring that there is a reasonable limitation on the abuse of market power. In fact, the providing carrier is likely to obtain a higher profit margin from roaming services than from retail services because a providing carrier does not have to incur customer acquisition or customer care costs in connection with its roaming services. Furthermore, the only carriers that would be effected if the Commission adopted Leap's proposals are those that have in fact adopted anticompetitive pricing practices. The nationwide carriers' predictions that Commission intervention would lead to reduced build-out and elimination of one-rate plans therefore lack merit.

Contrary to the suggestion of nationwide carriers that existing market conditions foster a competitive environment, the characteristics that underpin wholesale markets for roaming—increased consolidation and concentration, and an effective duopoly within technological formats—are the root cause of market *disincentives*: These factors prevent full market participation of small, regional, rural carriers, discourage network build-out in rural areas, and distort spectrum value. Eliminating the anticompetitive incentives that follow from these conditions would not harm consumers, as the nationwide carriers suggest, but would clearly

³³ A bright rule would also reduce bargaining costs between carriers. *See, e.g.*, Johnathan R. Hay et al., *Toward a Theory of Legal Reform*, 40 EUROPEAN ECON REVIEW 559 (1996) (outlining benefits of bright-line rules).

benefit consumers—particularly those customers who remain underserved by large carriers. As the ERS Group explains in its *Further Analysis*, the proposals that Leap advances here “would certainly have a net positive impact on the competitive environment of roaming services.”³⁴

Leap believes its proposed price-cap determination is the most reasonable and would lead to the greatest consumer benefit, but it also supports the proposals of SouthernLINC and Metro PCS over the status quo. Leap also agrees with the suggestion of other carriers that transparency would help the Commission and market participants identify unjust, unreasonable, and discriminatory practices; therefore, Leap encourages the Commission to adopt an automatic discovery procedure in the section 208 process, in conjunction with its proposed price cap. In order to protect against the release of proprietary and confidential information, any such information obtained through the complaint process could be subject to a protective order. Furthermore, Leap urges the Commission to take a more active role in monitoring the wholesale prices of the industry to ensure that CMRS providers uphold the common carrier obligations that Congress imposed.

CONCLUSION

For the reasons explained in its initial comments and in these reply comments, Leap urges the Commission to adopt the following rules, pursuant to the Commission’s authority under 47 U.S.C. §§ 201, 202, and 332:

- 1) The Commission should require facilities-based carriers to furnish automatic roaming service upon the request of another carrier, including a facilities-based competitor, unless the facilities-based carrier adequately demonstrates to the Commission that the service is not compatible with, or there is no available capacity on, its network.

³⁴ *ERS Further Analysis* at 11.

- 2) Facilities-based carriers should be prohibited from discriminating against similarly-situated carriers in the rates charged for, or the terms and conditions of, roaming service.
- 3) In areas where there are three or fewer facilities-based carriers from which the carrier seeking automatic roaming service could obtain such service, the Commission should prohibit a facilities-based carrier from demanding rates for automatic roaming that exceed that carrier's average retail revenue per minute for that area.

Leap believes these rules are manifestly in the public interest, and indeed, are compelled by the common carrier provisions of Title II of the Act. Leap also endorses the proposals of other commenters as explained at section II of these reply comments.

Respectfully submitted,

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REPLY COMMENTS OF LEAP WIRELESS INTERNATIONAL, INC.

Attachment A

**The Existence of Regional, Technology-Specific
Wholesale Antitrust Markets for Roaming Services**

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January 26, 2006

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Appendix: CV of David S. Sibley		

I. QUALIFICATIONS, INTRODUCTION, AND SUMMARY OF CONCLUSIONS

A. Qualifications

My name is David S. Sibley. I am the John Michael Stuart Centennial Professor of Economics at the University of Texas at Austin. I hold a Ph.D. in economics from Yale University and a B.A. in economics from Stanford University.

In addition to my current teaching responsibilities at the University of Texas at Austin, in October 2004, I completed an eighteen-month term as Deputy Assistant Attorney General for Economic Analysis in the Antitrust Division of the U.S. Department of Justice (“DOJ”), the highest-ranking economics position within the Division. In this capacity, I supervised all economic analysis within the Antitrust Division (including both merger and non-merger investigations) and directed its Economic Analysis Group. As Deputy Assistant Attorney General, I also contributed to the economic analysis of general policy issues and represented the United States in Organization for Economic Cooperation and Development (“OECD”) discussions on vertical foreclosure.

I have also taught graduate-level courses in economics at the University of Pennsylvania and Princeton University. For the last thirty years, I have carried out extensive research in the areas of industrial organization, microeconomic theory, and regulation. My publications have appeared in a number of leading economic journals, including the *Journal of Economic Theory*, *Review of Economic Studies*, *Rand Journal of Economics*, *American Economic Review*, *Econometrica*, and the *International Economic Review*, among others. I am a co-author (with Steven J. Brown) of a leading textbook on monopoly pricing, *THE THEORY OF PUBLIC UTILITY PRICING*, published by Cambridge University Press. Prior to joining the University of Texas, I was head of the Economics

Research Group at Bell Communications Research and I served as a member of the Technical Staff in economics at Bell Laboratories.

I have consulted extensively for various firms and agencies, both in the United States and abroad, on antitrust and regulatory matters. I served as a consultant to the Antitrust Division of the DOJ in the *Microsoft* antitrust case and was involved in both the trial and remedy phases of that litigation. I also served as a consultant to the U.S. Federal Trade Commission (“FTC”) on several matters involving the competitive effects of horizontal and vertical mergers. Additional details regarding my qualifications and experience are given in my *curriculum vitae*, a recent copy of which is attached as Appendix 1.

B. Introduction

In August 2005, the Federal Communications Commission (“FCC” or “the Commission”) issued a Memorandum Opinion and Order and Notice of Proposed Rulemaking (“MOO/NPRM”) examining the roaming obligations of Commercial Mobile Radio Service (“CMRS”) providers, including the need for an automatic roaming requirement (“ARR”).¹

In their comments in response to the MOO/NPRM, the national CMRS carriers, i.e., Cingular Wireless (“Cingular”), Sprint Nextel Corporation (“Sprint Nextel”), T-Mobile USA (“T-Mobile”), and Verizon Wireless (“Verizon”), claim that an ARR is unnecessary due to the competitiveness of retail CMRS markets.² However, the national

¹ See, Memorandum Opinion and Order and Notice of Proposed Rulemaking, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, FCC 05-160 (released August 31, 2005).

² See, Comments of Cingular Wireless LLC, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 18-22, Gregory L. Rosston, *An Economic Analysis of How Competition Has Reduced High Roaming Charges*, filed on behalf

CMRS carriers' claim confuses competition in regional wholesale markets for roaming services with competition in retail CMRS markets. This confusion regarding wholesale and retail markets appears to be a consequence of the lack of any market definition analysis performed by the national CMRS carriers or their experts, who appear to regard the retail CMRS market and the wholesale market for roaming as essentially identical.

Leap Wireless International, Inc. ("Leap") and Centennial Communications Corp. ("Centennial") have asked me to examine whether there exist relevant technology-specific regional wholesale antitrust markets for voice and data roaming services. Below, I examine this issue by applying the framework for market definition described in the U.S. Federal Trade Commission's ("FTC") and the U.S. Department of Justice's ("DOJ") Horizontal Merger Guidelines ("Merger Guidelines"). I first provide some background information regarding wholesale roaming in Section II below. Next, in Section III, I describe the framework for market definition in the Merger Guidelines, which is the most commonly used framework for antitrust market definition. In Section IV, I apply the Merger Guideline's market definition framework to wholesale roaming services. Finally, in Section V, I critique the market definition analysis performed by Dr. Gregory L. Rosston in his comments on behalf of Sprint Nextel.

C. Summary of Conclusions

Based on my analysis, I reach the following conclusions:

1. The national CMRS carriers and Dr. Rosston claim that the competitiveness of retail CMRS markets implies that wholesale-level concerns regarding roaming

of Sprint Nextel, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 11-14, Comments of Verizon Wireless, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 7-12, and Comments of T-Mobile USA, Inc., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 13-16.

are unfounded. However, this claim appears to be a result of the lack of any correct market definition analysis performed by the national CMRS carriers and Dr. Rosston.

2. A proper application of the Merger Guidelines framework for market definition in the presence of price discrimination implies that there exist relevant technology-specific regional wholesale antitrust markets for voice roaming services sold to regional carriers as a group. In particular, I demonstrate that there exist regional wholesale antitrust markets for voice roaming services sold to regional carriers for both CDMA and iDEN technologies. I have not been able to obtain the data required to apply the Merger Guidelines “hypothetical monopolist” test to regional wholesale markets for voice roaming services sold to regional carriers for GSM technology. However, I have seen no evidence to indicate that my conclusions with respect to GSM technology would differ from my conclusions with respect to the iDEN and CDMA technologies.
3. In addition, although I also do not have the data to apply the Merger Guidelines “hypothetical monopolist” test to technology-specific regional wholesale markets for data roaming services sold to regional carriers, I have seen no evidence to indicate that my conclusions with respect to data roaming services would differ from my conclusions with respect to the iDEN and CDMA technologies for voice roaming services. That is, I have seen no evidence to indicate that there do not exist technology-specific regional wholesale antitrust markets for data roaming services sold to regional carriers.

II. WHOLESALE ROAMING BACKGROUND

A. Wholesale Roaming and Manual vs. Automatic Roaming

Retail CMRS customers purchase service from a carrier in their home area. When a customer either travels outside her home area or utilizes the network of another carrier while making a phone call (or using data services), then the customer is said to be roaming. Roaming may be classified into two categories: on-network and off-network. On-network roaming occurs when a customer makes a call from outside her home area, while still on the network of her carrier. Off-network roaming occurs when a customer makes a call utilizing the network of another carrier.

There are two ways of implementing off-network roaming: manual roaming and automatic roaming. Under manual roaming, a customer must register with the network she wishes to use for off-network roaming prior to using that network. The customer must place a call with the assistance of an operator, and provide a credit card number for payment. Note that manual roaming is an action that is initiated by the customer and is likely invisible to the customer's carrier. In contrast, under automatic roaming, a carrier arranges for its customers to use another carrier's network.

Since, under automatic roaming, a carrier acquires the right to roam on another carrier's network on behalf of its customers, automatic roaming is a wholesale product. That is, automatic roaming is an input that is acquired by a carrier in order to provide its customers with a retail service, i.e., off-network roaming.

B. Evidence of Price Discrimination for Wholesale Roaming Services

There is considerable evidence of price discrimination at the wholesale level for roaming services. The following list illustrates the discriminatory wholesale roaming rates (including refusals to deal) offered to regional carriers by the national CMRS carriers.

1. RTG and OPASTCO, two small carrier associations, filed comments indicating that their members pay roaming rates to national carriers that range from \$0.35 to \$0.99 per minute with an average highest rate of \$0.52 per minute. RTG and OPASTCO also indicated that Verizon does not allow the customers of rural carriers to roam in their home state, i.e., just outside the “island” in which a rural carrier operates.³
 2. NTCH, Inc., a regional carrier, filed comments indicating that it had to exit a region because it was unable to obtain service on reasonable terms – one CDMA national carrier offered NTCH roaming at \$0.50 per minute with an additional \$0.15 per minute for long distance while the other CDMA national carrier from whom NTCH could have obtained roaming refused to even negotiate terms until after the MOO/NPRM was initiated.⁴
 3. Leap filed comments indicating that the average rate it pays large carriers for roaming is \$0.28 per minute with the highest rates exceeding \$0.40 per minute.⁵
- Furthermore, my understanding is that at least one large carrier that offers Leap

³ See, Comments of the Rural Telecommunications Group, Inc. and The Organization for the Promotion and Advancement of Small Telecommunications Companies, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 10-12.

⁴ See, Comments of NTCH, Inc., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 3-4.

⁵ See, Comments of Leap International, Inc., Declaration of Robert J. Irving, Jr., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, p. 2.

- roaming may arbitrarily define Leap's home area, and denies Leap "home roaming" even in areas where Leap does not own spectrum or operate a network.⁶
4. SouthernLINC Wireless ("SouthernLINC"), a regional carrier, has been unable to obtain a roaming agreement from Nextel Partners, a partially owned affiliate of Sprint Nextel, and SouthernLINC's only wholesale supplier of iDEN roaming services in some regions.⁷
 5. Airtel Wireless ("Airtel") operates an iDEN network in the state of Montana. The only "roaming" arrangement that Airtel Wireless has been able to reach with Sprint Nextel, which does not offer iDEN service in Montana, requires Airtel's customers to purchase prepaid Sprint Nextel SIM cards and replace their Airtel SIM cards with the Sprint Nextel SIM cards when they travel outside Montana. As noted by Airtel, it is not clear whether the arrangement with Sprint Nextel even qualifies as a roaming arrangement since Airtel's customers cannot use their own phone numbers when using the Sprint Nextel SIM cards; instead they are provided with a Sprint Nextel phone number when traveling outside Montana.⁸
 6. Airpeak Communications ("Airpeak") operates an iDEN network in the states of Nevada, New Mexico, and Washington. Sprint Nextel failed to even respond to Airpeak's request for negotiations regarding a roaming agreement.⁹

⁶ See, Comments of Leap International, Inc. ("Leap Comments"), *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, p. 15.

⁷ See, Comments of SouthernLINC Wireless, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, p. 3.

⁸ See, Joint Comments of Airpeak Communications, LLC and Airtel Wireless, LLC, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, p. 7.

⁹ See, Joint Comments of Airpeak Communications, LLC and Airtel Wireless, LLC, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, p. 7.

In contrast to the experience of regional carriers in attempting to negotiate roaming agreements with the national CMRS carriers, according to ERS Group's comments on behalf of Leap, affiliates of the national CMRS carriers pay wholesale roaming rates between \$0.04 to \$0.08 per minute, while Mobile Virtual Network Operators ("MVNOs") pay wholesale roaming rates between \$0.05 to \$0.10 cents per minute.¹⁰ This is direct evidence of price discrimination at the wholesale level.

In addition, according to Professor R. Preston McAfee's comments on behalf of SouthernLINC, the national CMRS carriers offer their retail customers single-rate calling plans (i.e., plans with no additional charges for roaming, whether on or off a carrier's network) that yield the national CMRS carriers average gross revenues of between \$0.026 and \$0.05 per minute (for the lowest per minute rate plans).¹¹ That is, regional carriers are apparently charged wholesale roaming rates far in excess of the lowest retail rates offered by the national CMRS carriers to their retail customers. Next, I discuss the approach to antitrust market definition outlined in the Merger Guidelines.

III. THE MERGER GUIDELINES FRAMEWORK FOR MARKET DEFINITION

The approach most often used for antitrust product market definition is the so-called "hypothetical monopolist" test described in the Merger Guidelines. According to the Merger Guidelines:

Absent price discrimination, the Agency will delineate the product market to be a product or group of products such that a hypothetical profit-

¹⁰ See, Comments of ERS Group, on behalf of Leap International, Inc., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, p. 11.

¹¹ See, R. Preston McAfee, *The Economics of Wholesale Roaming in CMRS Markets* ("McAfee Comments"), filed on behalf of SouthernLINC Wireless, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, Table 1, p.9.

maximizing firm that was the only present or future seller of these products (“monopolist”) likely would impose at least a “small but significant and nontransitory increase in price.”¹²

As demonstrated in the previous section, wholesale roaming markets display at least one feature that is at odds with the above approach, namely, that price discrimination appears to exist. The Merger Guidelines allow for this possibility, however, by expanding the above approach to allow for what are sometimes called “price discrimination markets.” That is, it may be the case that some groups of customers differ from others in their ability to evade the effects of a “small but significant and nontransitory increase in price” (“SSNIP”). For this reason, a hypothetical monopolist may charge those customers a different price than customers that are more readily able to escape a SSNIP. If a SSNIP imposed on a group of customers would indeed be profitable, then that group of customers should be treated as a separate antitrust market. Thus, according to the Merger Guidelines:

If a hypothetical monopolist can identify and price differently to those buyers (‘targeted buyers’) who would not defeat the targeted price increase by substituting to other products in response to a ‘small but significant and nontransitory’ price increase for the relevant product, and if other buyers likely would not purchase the relevant product and resell to targeted buyers, then a hypothetical monopolist would profitably impose a discriminatory price increase on sales to targeted buyers. *This is true regardless of whether a general increase in price would cause such significant substitution that the price increase would not be profitable.*¹³ (Emphasis added.)

Naturally, for a price discrimination market to exist, it must be impossible for the customers being charged a low price to resell to the customers being charged a high price. This requirement is easily met in the case of CMRS, since current contractual practices

¹² Merger Guidelines, Section 1.11.

¹³ Merger Guidelines, Section 1.12.

prevent the resale of roaming minutes, whether at the wholesale or retail levels. I now turn to an application of the Merger Guidelines approach to market definition to wholesale roaming services.

IV. APPLICATION OF THE MERGER GUIDELINES FRAMEWORK TO WHOLESALE ROAMING

In this section, I apply the framework outlined in the Merger Guidelines to wholesale roaming services. In this context, I note that markets for roaming services are, by their very nature, regional. That is, roaming services in one region (whether city, county, state, or country) are not economic substitutes for roaming services in another region. Thus, a consumer of roaming services (i.e., a regional CMRS carrier) in San Francisco, CA cannot avoid a SSNIP by substituting to roaming services in Austin, TX. For this reason, I will take the regional nature of wholesale markets for roaming services as given.

First, I note that in the context of CMRS roaming, it is important to specify the technology used by the hypothetical monopolist. This is because a seller that uses a particular digital technology can only provide roaming for a buyer that uses the same technology. For example, SouthernLINC, which uses the iDEN format, can buy roaming only from Sprint Nextel (and its partially owned affiliate, Nextel Partners) because only that national CMRS carrier can provide roaming for carriers operating iDEN networks. Similarly, Leap operates a CDMA network, and so is limited to a roaming wholesaler that also uses that technology. My understanding is that the use of dual-mode handsets, which would permit substitution across different wireless technologies, is not currently a

viable option for regional carriers. The reason why is that, even when available, dual-mode handsets are more expensive than single-mode handsets with comparable features and, in addition, there are relatively few dual-mode handset designs available.¹⁴ Apparently, business travelers who wish to roam internationally are the primary users of dual-mode handsets. Significantly, I have been informed that, due to the aforementioned limitations of currently available dual-mode handsets, Leap has not found it profitable to sell dual-mode handsets to its customers in order to substitute away from CDMA wholesale roaming. Thus, if wholesale roaming is a relevant antitrust market, it is a technology-specific market.

Next, since regional carriers appear to be charged different roaming rates by suppliers of wholesale roaming than the rates offered to the suppliers' affiliates and MVNOs, and since current contractual practices prevent any resale of roaming services, the correct approach in applying the hypothetical monopolist test is to treat regional operators as a group as a price discrimination market.¹⁵

The final step in applying the SSNIP test to a price discrimination market is to specify the initial price to which the increment (i.e., the SSNIP) must be added. In the case where the current price is the profit-maximizing price (i.e., the monopoly price for the hypothetical monopolist), a SSNIP on top of that price would never be profitable, so the SSNIP should be added to an estimate of the competitive price.¹⁶ If the estimated competitive price plus the SSNIP is less than the current price, then the product in

¹⁴ Based on discussions with Leap, I understand that there are no dual-mode iDEN/CDMA handsets currently available.

¹⁵ This assumes wholesale suppliers of roaming services charge regional carriers similar rates in a particular region. As discussed below, if there is price discrimination across regional carriers in a particular region, then the relevant price discrimination markets may be narrower, even regional carrier-specific.

¹⁶ See, Merger Guidelines, Section 1.11.

question is a relevant antitrust market. The logic here is that if (1) the competitive price plus the SSNIP is less than the current price and (2) the current price is the profit-maximizing monopoly price, then the SSNIP must be profitable. In this case, the hypothetical monopolist would want to raise the price even further (i.e., beyond the competitive price plus the SSNIP).

This logic applies directly to the case of regional carriers, like SouthernLINC, that operate iDEN networks since Sprint Nextel (and its partially owned affiliate, Nextel Partners) is the only national seller of wholesale iDEN roaming services.¹⁷ Professor McAfee, in his comments on behalf of SouthernLINC, reports the average gross revenue per minute for the single-rate plans with the lowest per minute rate offered by the four national CMRS carriers, Verizon, Cingular, Sprint Nextel and T-Mobile. Single-rate plans are a useful benchmark because such plans do not levy any additional charges on consumers for roaming – whether on or off a carrier’s network. The average gross revenue for the single-rate plan with the lowest per minute rate offered by Sprint Nextel is 5 cents per minute.¹⁸ It is reasonable to suppose that Sprint Nextel’s marginal cost is no higher than this, so that we may take 5 cents per minute as a conservative estimate of the competitive retail per minute rate. In addition, among the single-rate plans offered by Sprint Nextel, the highest average gross revenue per minute offered to consumers is 15 cents per minute.¹⁹ This latter rate seems even more likely to be an upper bound estimate of the competitive price at the retail level. In order to get an estimate of a competitive wholesale roaming price, one needs to deduct from the retail price the estimated costs of

¹⁷ See, McAfee Comments, p. 11.

¹⁸ See, McAfee Comments, Table 1, p. 9.

¹⁹ Based on information available at the Sprint Nextel website (website last visited on January 6, 2006). Sprint Nextel’s single-rate plan with the highest per minute rate, the “Fair and Flexible” plan with 200 included minutes, costs \$29.99 or \$0.15 per minute and includes unlimited night and weekend minutes

customer acquisition, billing and customer care since these costs are avoided when serving wholesale customers. Professor McAfee has estimated these costs to be about 2 cents per minute,²⁰ so that minimum and maximum estimates of a competitive *wholesale* roaming price are 3 cents per minute and 13 cents per minute, respectively. I note that these estimates are likely to be conservative for two reasons. First, the Sprint Nextel plan rates quoted above include unlimited “night and weekend” minutes – implying that the actual per minute rates could be considerably lower for consumers who use a lot of night and weekend minutes. Second, since the rates quoted above are *retail* rates, they should include a profit margin that would push these rates above the competitive wholesale level.

A 5 percent SSNIP on the maximum estimated competitive wholesale price for iDEN wholesale roaming of 13 cents per minute implies a wholesale roaming price of 13.65 cents per minute while a 10 percent SSNIP implies a wholesale roaming price of 14.3 cents per minute.²¹ Thus, based on the 10 percent SSNIP test, there is a relevant antitrust market for iDEN wholesale roaming sold to regional carriers as long as regional carriers are charged a wholesale roaming rate that exceeds approximately 15 cents per minute. Similarly, based on my estimated minimum competitive price for iDEN wholesale roaming of 3 cents per minute, there is a relevant antitrust market for iDEN wholesale roaming sold to regional carriers as long as regional carriers are charged a wholesale roaming rate that exceeds approximately 3.5 cents per minute based on a 10 percent SSNIP.

²⁰ See, McAfee Comments, p. 10.

²¹ According to the Merger Guidelines, the FTC and DOJ “will use a price increase of five percent lasting for the foreseeable future,” although the SSNIP could be larger or smaller depending on the nature of the industry being examined. See, Merger Guidelines, Section 1.11.

In order to complete the SSNIP test, I need to know the actual wholesale roaming prices paid by regional iDEN carriers. I do not have this information, but there are reports of some national CMRS carriers charging in excess of 30 cents per minute for wholesale roaming. As noted above, Leap is reportedly charged an average of 28 cents per minute for roaming service by large carriers. Since Leap operates a CDMA network, and there are two national CMRS carriers who operate CDMA networks as compared to a single national CMRS carrier for iDEN, it is reasonable to assume that regional iDEN carriers pay more than 15 cents per minute, implying that there exists a relevant antitrust market for iDEN wholesale roaming sold to regional carriers. In addition, as noted above, roaming markets are regional, by definition.

The analysis above assumes that regional iDEN carriers as a group are similarly situated to SouthernLINC with respect to roaming rates. To the extent that other regional iDEN carriers are not similarly situated to SouthernLINC, then the relevant antitrust market will be narrower, possibly regional carrier-specific. For example, if all regional iDEN carriers other than SouthernLINC received competitive wholesale roaming rates, then there would be regional antitrust markets for iDEN wholesale roaming sold to SouthernLINC.

I now examine regional carriers, like Leap, that operate CDMA networks. Since there are two national suppliers of CDMA wholesale roaming services and, depending on the region, additional regional suppliers of CDMA wholesale roaming services,²² the analysis is potentially more complicated than for the case of regional iDEN carriers. Suppose that a regional carrier like Leap requests roaming from a hypothetical

²² See, McAfee Comments, p. 6.

monopolist for a particular region. If the hypothetical monopolist imposed a SSNIP on top of the current price, what are a regional carrier's alternatives?

As discussed above, dual-mode handsets are not currently an economic alternative. Thus, the only alternative available to regional CDMA carriers in order to defeat a SSNIP is to build out their network to include the desired geographic area.²³ However, for this alternative to be considered for the purpose of market definition under the Merger Guidelines framework, building a network must not involve significant sunk costs that would not be recouped within one year.²⁴ Building a network, however, is a costly enterprise, since it involves the purchase of spectrum, the construction of new network facilities, and marketing and promotional costs. The costs of purchasing spectrum, particularly in areas with concentrated populations, are likely to be substantial. For example, Table One below presents the winning bids for 10 Mhz slices of spectrum in the FCC's auction no. 58 (Broadband PCS). The winning bid for the most populous region in auction no. 58, Los Angeles, CA, was over \$280 million.

²³ Note that, since regional iDEN carriers already face a monopolist, if such carriers request wholesale roaming services rather than building out their networks in a region, it follows that building out their networks is more expensive than acceding to the current wholesale price in a region, which is well above the competitive wholesale price plus a SSNIP, as discussed above.

²⁴ See, Merger Guidelines, Section 1.32.

TABLE ONE
NET WINNING BIDS FOR THE TEN MOST POPULOUS REGIONS
IN THE FCC'S AUCTION 58 (BROADBAND PCS)

License Size (Mhz)	Region Name	Population	High Bidder	Net Winning Bid (\$)
10	Los Angeles, CA	16,391,590	Royal Street Communications, LLC	280,897,500
10	Houston, TX	5,045,022	Vista PCS, LLC	103,104,000
10	Houston, TX	5,045,022	Cricket Licensee (Reauction), Inc.	94,742,000
10	Minneapolis-St. Paul, MN	3,293,598	Edge Mobile, LLC	16,468,000
10	Minneapolis-St. Paul, MN	3,293,598	Carroll Wireless, LP	15,756,750
10	Minneapolis-St. Paul, MN	3,293,598	Cook Inlet/VS GSM VII PCS, LLC	15,438,750
10	Seattle-Tacoma, WA	3,232,492	Vista PCS, LLC	35,709,000
10	Seattle-Tacoma, WA	3,232,492	Wirefree Partners III, LLC	27,774,750
10	Seattle-Tacoma, WA	3,232,492	Cook Inlet/VS GSM VII PCS, LLC	26,660,250
10	Cleveland-Akron, OH	2,993,610	Cook Inlet/VS GSM VII PCS, LLC	49,135,000
10	Cleveland-Akron, OH	2,993,610	Cellco Partnership d/b/a Verizon Wireless	48,036,000
10	Cleveland-Akron, OH	2,993,610	CSM Wireless, LLC	34,453,500
10	St. Louis, MO	2,873,395	Cellco Partnership d/b/a Verizon Wireless	141,983,000
10	San Diego, CA	2,813,833	Cellco Partnership d/b/a Verizon Wireless	61,405,000
10	San Diego, CA	2,813,833	Cricket Licensee (Reauction), Inc.	55,829,000
10	Denver, CO	2,712,488	Edge Mobile, LLC	15,596,000
10	Denver, CO	2,712,488	Cook Inlet/VS GSM VII PCS, LLC	11,824,500
10	Pittsburgh, PA	2,471,759	Edge Mobile, LLC	14,213,000
10	Pittsburgh, PA	2,471,759	Edge Mobile, LLC	12,359,000
10	Pittsburgh, PA	2,471,759	Vista PCS, LLC	12,359,000
10	Cincinnati, OH	2,170,768	Vista PCS, LLC	21,312,000
10	Cincinnati, OH	2,170,768	Alaska Native Broadband 1 License, LLC	20,242,000
10	Cincinnati, OH	2,170,768	Wirefree Partners III, LLC	18,630,750
10	Portland, OR	2,114,640	CSM Wireless, LLC	19,185,000

Source:

U.S. Federal Communications Commission, available at <http://wireless.fcc.gov/auctions/58/charts/58markets.xls> (website last visited on January 6, 2005).

The costs of purchasing spectrum are not necessarily sunk since spectrum can be resold. However, the value of spectrum can fluctuate over time, and the magnitude of the costs involved in acquiring spectrum in cities like Los Angeles implies that even a relatively small decrease in the value of spectrum could impose significant unrecoverable

costs (i.e., sunk costs) on a regional carrier that attempted to build out its network in such areas. In addition, although I do not have data on the sunk costs associated with constructing network infrastructure or marketing and promotional costs, these could well be substantial.

Even more important for the market definition exercise, however, is the time dimension. As noted above, for the expanding regional carrier to count as an additional supplier under the Merger Guidelines, there can be no sunk entry costs that cannot be recovered within one year. To build out a CMRS network in an area like Los Angeles is almost certain to take more than one year, even if this were to be done via merger or acquisition.²⁵ Hence, for the purpose of the SSNIP test, building out a network is not likely to be an option allowed under the Merger Guidelines framework, even if it were economic.

Next, I apply the SSNIP test to regional CDMA carriers. Since there are typically multiple potential suppliers for wholesale CDMA roaming services, performing the SSNIP test for regional CDMA carriers is less straightforward than for regional iDEN carriers. I use data available for Leap and assume that other regional CDMA carriers are similarly situated. My understanding, based on discussions with Leap, is that roughly 20 percent of Leap's roaming minutes are in regions where Leap has a single CDMA roaming partner. In these regions, Leap does not obtain roaming service from one national CDMA carrier due to that carrier's definition of home roaming. Leap's wholesale roaming rate for these regions exceeds 40 cents per minute. Thus, I conclude that the monopoly price for wholesale CDMA roaming is at least equal to 40 cents per

²⁵ Based on discussions with Leap, I understand that building out a network usually takes between 12 to 18 months.

minute. In addition, I understand that Leap's remaining roaming minutes are in regions that are at least partially competitive markets, with two or more CDMA roaming partners. For these regions, I am informed that the average roaming price paid by Leap is less than 20 cents per minute. Thus, I conclude that the competitive price for wholesale CDMA roaming is less than 20 cents per minute. These facts imply that a 5 or 10 percent SSNIP above the competitive price is clearly profitable, and hence regional wholesale CDMA roaming sold to regional CDMA carriers is a relevant antitrust market.²⁶

The foregoing analysis assumes that regional CDMA carriers as a group are similarly situated to Leap with respect to both the number of national CMRS carriers offering wholesale roaming services and the roaming rates available. To the extent that regional CDMA carriers are not similarly situated to Leap, then the relevant antitrust markets will be narrower, possibly regional carrier-specific. For example, if all regional CDMA carriers other than Leap received competitive wholesale roaming rates, then there would be regional antitrust markets for CDMA wholesale roaming sold to Leap.

As noted above, I do not have data on the wholesale roaming rates paid by regional GSM carriers. For this reason, I cannot perform a SSNIP test to determine whether there exist regional antitrust markets for GSM wholesale roaming sold to regional GSM carriers. However, I have seen no evidence to indicate that such markets do not exist. In addition, as in the case of CDMA and iDEN, to the extent that different regional GSM carriers are charged different wholesale roaming rates, the relevant markets for wholesale GSM roaming will be narrower, possibly even regional carrier-specific.

²⁶ I assume that the competitive and monopoly roaming price is the same across regions. Based on discussions with Leap, I understand that this is a good approximation since the marginal cost of roaming is likely roughly similar across regions.

Finally, the foregoing discussion has focused on voice roaming services. However, similar analyses would also apply to data roaming services. Data roaming services are distinct from voice roaming services because a consumer of data roaming services could not substitute voice roaming services in order to defeat a SSNIP, and vice versa. Unfortunately, as with GSM voice roaming services, I lack the data to perform a SSNIP test to determine whether there exist technology-specific regional wholesale markets for data roaming services sold to regional carriers. However, I have seen no evidence that would indicate that such markets do not exist. And, as with voice roaming services, to the extent that different regional carriers are charged different rates for data roaming services, narrower, possibly regional carrier-specific antitrust markets could exist.

V. A CRITIQUE OF DR. ROSSTON'S MARKET DEFINITION ANALYSIS

Dr. Rosston, in his comments on behalf of Sprint Nextel, has discussed the issue of market definition within the context of this proceeding. He concludes that wholesale roaming by technology type is not an antitrust market.²⁷ Having reviewed his analysis, I am at a loss to understand his reasoning. Dr. Rosston begins with a reference to the Merger Guidelines, and tries to give the impression that his analysis is based on them. In fact, he confuses *wholesale* market definition with broad statements about the competitiveness of the CMRS *retail* market. Thus, he not only deals with the wrong market, but he confuses statement about the competitive effects of a merger with market definition. As I explain below, these are two very different things.

²⁷ See, Gregory L. Rosston, *An Economic Analysis of How Competition Has Reduced High Roaming Charges* ("Rosston Comments"), filed on behalf of Sprint Nextel, *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265, November 28, 2005, pp. 11-12.

To begin with, both common sense and the Merger Guidelines make it clear that the hypothetical monopolist test must be done using the price that corresponds to the market under analysis: “[in] general, the price for which an increase will be postulated will be whatever is considered to be the price of the product at the stage of the industry being examined.”²⁸ Dr. Rosston’s, however, tries to analyze market definition of wholesale roaming by reference to the retail price paid by CMRS customers:

Narrow technology-specific relevant markets would be inappropriate because a hypothetical monopolist of a specific technology in another area could not increase prices profitably in the home market by raising roaming charges. As the FCC noted in the recent merger analysis quoted above, higher roaming rates for one specific technology would lead consumers in the home market to choose other technologies.²⁹

This discussion makes it clear that Dr. Rosston is relating the effect of a rise in the price of an input (wholesale roaming) to its effects on the price of a retail product (CMRS). This violates the methodology of the Merger Guidelines. This is not simply a formalistic point, with no practical effect; Dr. Rosston’s procedure distorts the entire market definition analysis. To see why, note that Dr. Rosston assumes implicitly that a 5 percent or 10 percent SSNIP in the wholesale price of roaming will cause the customer of a hypothetical CDMA monopolist to substitute to a hypothetical GSM or iDEN monopolist. He performed no analysis of whether this is at all likely, given the very much reduced percentage effect that a wholesale SSNIP will have on a customer’s retail bill. For example, according to the CTIA (whose survey data are also used by Dr. Rosston), for small operators, roaming revenues are approximately 16.6 percent of total

²⁸ Merger Guidelines, Section 1.11.

²⁹ Rosston Comments, p. 13.

revenues.³⁰ As a first approximation, then, a 5 percent SSNIP in roaming rates implies a 0.8 percent increase in a customer's retail bill, and a 10 percent SSNIP only a 1.7 percent increase in a customer's retail bill. In neither case does the size of the induced effect of the wholesale roaming price on a customer's retail bill come close to the Merger Guidelines standard level of 5 percent, let alone 10 percent. The foregoing analysis demonstrates that Dr. Rosston's attempt to conduct the hypothetical monopolist test is incorrectly carried out, and hence his conclusions regarding market definition are wrong.

More Generally, Dr. Rosston's approach has absurd implications for market definition as is demonstrated by the following thought experiment. Suppose that we were concerned with defining a market for computer circuit boards and that there are two kinds of computer circuit boards, which differ only in color, one being red and the other brown. Suppose also that circuit boards are unseen by computer users, and hence the two kinds of circuit boards are perfect substitutes for computer manufacturers, who are indifferent about the color of a circuit board. Suppose further that each type of circuit board comprises 4 percent of the total price of a computer. Then, doing the market definition analysis correctly at the wholesale level, a SSNIP in the price of a red circuit board would cause computer makers to substitute brown circuit boards for red ones, since they are perfect substitutes. Clearly, both colors are in the same antitrust market. Using Dr. Rosston's approach, however, a 10 percent SSNIP in the price of a red circuit board would only cause the total price of a computer using red circuit boards to rise by 0.4 percent, which is far too low to be a SSNIP. Following Dr. Rosston's logic, since the likely impact of a 10 percent SSNIP on the sale of computers with red circuit boards is

³⁰ See, CTIA, Small Market Operators in the U.S. Wireless Marketplace: Semi-Annual Data Survey Results, Year-End 2004 Results, June 2005, Table 59, p. 78.

nearly zero, one would conclude, erroneously, that red and brown circuit boards are in separate antitrust markets. In general, because Dr. Rosston's methodology for market definition, which contrary to his assertions is not the framework outlined in the Merger Guidelines, mixes up wholesale demand with the retail price of a product, he would wrongly conclude that many perfect substitutes at the wholesale level were in separate antitrust markets.

APPENDIX

***CURRICULUM VITAE* OF DAVID S. SIBLEY**

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University of Texas at Austin
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Education:

1969 B. A. in Economics, Stanford University
1973 Ph.D. in Economics, Yale University

Teaching Fields:

Graduate and undergraduate courses in industrial organization, including topics covering antitrust and regulation.

Research Fields:

Vertical restrictions, including bundling and tying; vertical and horizontal mergers; public utility pricing and regulatory policy.

Professional Experience:

May 2003 – October 2004: Deputy Assistant Attorney General for Economic Analysis, U.S. Department of Justice, Washington, D.C.

March 1992 – Present: John Michael Stuart Centennial Professor of Economics, University of Texas at Austin.

August 1991- March 1992: Edward Everett Hale Centennial Professor of Economics, University of Texas at Austin.

September 1983 - August 1991: Research Manager, Bell Communications Research, Morristown, NJ. Head of Economics Research Group.

September 1981- September 1983: Member of Technical Staff, Bell Laboratories, Murray Hill, NJ.

September 1980 - September 1981: Adviser to the Chairman of the Civil Aeronautics Board.

January 1980 - September 1980: Consultant, Civil Aeronautics Board, Washington, D.C.

September 1978 - January 1980: Senior Staff Economist, Council of Economic Advisers, Executive Office of the President, Washington, D.C.

October 1973 - September 1978: Member of Technical Staff, Bell Laboratories, Holmdel, NJ.

Teaching:

September 1991 - Present: Introductory Microeconomics, undergraduate and graduate Industrial Organization.

Fall 1989: Visiting Lecturer, Woodrow Wilson School of Public and International Affairs, Princeton University. Graduate course in regulation and public choice.

September 1983 - December 1983: Adjunct Lecturer in Economics, University of Pennsylvania. Graduate course on regulation.

Publications:

A. Journal Articles:

“A Note on the Concavity of the Mean-Variance Problem,” *Review of Economic Studies*, July 1975.

“Permanent and Transitory Income Effects in a Model of Optimal Consumption with Wage Income Uncertainty,” *Journal of Economic Theory*, August 1975.

“Optimal Foreign Borrowing with Export Revenue Uncertainty,” (with J. L. McCabe), *International Economic Review*, October 1976.

“The Demand for Labor in a Dynamic Model of the Firm,” *Journal of Economic Theory*, October 1977.

“Optimal Decisions with Estimation Risk,” (with L. C. Ratsky, R. W. Klein and R. D. Willig), *Econometrica*, November 1977.

“Regulatory Commission Behavior: Myopic vs. Forward-Looking,” (with E. E. Bailey), *Economic Inquiry*, June 1978.

“Public Utility Pricing Under Risk: The Case of Self-Rationing,” (with J. C. Panzar), *American Economic Review*, December 1978. To be reprinted in *The International Library of Critical Writings in Economics*, Mark Blaug (ed.), Edward Elgar Press.

“A Dynamic Model of the Firm with Stochastic Regulatory Review,” (with V. S. Bawa), *International Economic Review*, October 1980.

“Optimal Nonlinear Pricing for Multiproduct Monopolies,” (with L. J. Mirman), *Bell Journal of Economics*, Autumn 1980. To be reprinted in *The International Library of Critical Writings in Economics*, Mark Blaug (ed.), Edward Elgar Press.

“Efficiency and Competition in the Airline Industry,” (with D. R. Graham and D. P. Kaplan), *Bell Journal of Economics*, Spring 1983.

“Optimal Non-Uniform Pricing,” (with M. B. Goldman and H. E. Leland), *Review of Economic Studies*, April 1984. To be reprinted in *The International Library of Critical Writings in Economics*, Mark Blaug (ed.), Edward Elgar Press.

“Reply to Lipman and Further Results,” *International Economic Review*, June 1985.

“Public Utility Pricing Under Risk: A Generalization,” *Economics Letters*, June 1985.

“Optimal Consumption, the Interest Rate and Wage Uncertainty,” (with D. Levhari), *Economics Letters*, 1986.

“Regulating Without Cost Information: The Incremental Surplus Subsidy Scheme,” (with D. M. Sappington), *International Economic Review*, May 1989.

“Asymmetric Information, Incentives and Price Cap Regulation,” *Rand Journal of Economics*, Fall 1989.

“Optimal Two Part Tariffs for Inputs,” (with J. C. Panzar), *Journal of Public Economics*, November 1989.

“Regulating Without Cost Information: Some Further Thoughts,” (with D. M. Sappington), *International Economic Review*, November 1990.

“Compensation and Transfer Pricing in a Principal-Agent Model,” (with D. E. Besanko), *International Economic Review*, February 1991.

“Thoughts on Nonlinear Pricing Under Price Cap Regulation,” (with D. M. Sappington), *Rand Journal of Economics*, Spring 1992.

“Ex Ante vs. Post Pricing: Optional Calling Plans vs. Tapered Tariffs,” (with K. Clay and P. Srinagesh), *Journal of Regulatory Economics*, 1992.

“Optimal Non-linear Pricing With Regulatory Preference over Customer Types,” (with W. W. Sharkey), *Journal of Public Economics*, February 1993.

“Regulatory Incentive Policies and Abuse,” (with D. M. Sappington), *Journal of Regulatory Economics*, June 1993.

“A Bertrand Model of Pricing and Entry,” (with W. W. Sharkey), *Economics Letters*, 1993.

“Optional Two-Part Tariffs: Toward More Effective Price Discounting,” (with R. Rudkin) in *Public Utilities Fortnightly*, July 1, 1997.

“Multiproduct Nonlinear Prices with Multiple Taste Characteristics,” (with P. Srinagesh), *Rand Journal of Economics*, Winter 1997.

“The Competitive Incentives of Vertically-Integrated Local Exchange Carriers: An Economic and Policy Analysis,” (with D. L. Weisman), *Journal of Policy Analysis and Management*, Winter 1998.

“Having Your Cake – How to Preserve Universal-Service Cross Subsidies While Facilitating Competitive Entry,” (with Michael J. Doane and Michael A. Williams), *Yale Journal on Regulation*, Summer 1999.

“Raising Rivals’ Costs: The Entry of a Upstream Monopolist into Downstream Markets,” (with D. L. Weisman), *Information, Economics and Policy* 10:451-470

“Selected Economic Analysis at the Antitrust Division: The Year in Review,” (with K. Heyer), *Review of Industrial Organizations* 23: 95-119, 2003

“Pricing Access to a Monopoly Input,” (with Michael J. Doane, Michael A. Williams, and S. Tsai), *Journal of Public Economic Theory*, Vol. 6., No. 4, 2004.

B. Reports and Articles in Conference Volumes, and Other Publications

“The Dynamics of Price Adjustment in Regulated Industries,” (with E. E. Bailey), in *Proceedings of IEEE Conference on Systems Control*, 1974.

“Optimal Non-Uniform Pricing for Electricity: Some Illustrative Examples,” (with R. W. Koenker), in Sichel (ed.) *Public Utility Ratemaking in an Energy-Conscious Environment*, Praeger, 1979.

“Antitrust Policy in the Airline Industry,” (with S. B. Jollie), Civil Aeronautics Board, October 1982. Transmitted by the CAB to Congress as part of proposed sunset legislation.

“Deregulation and the Economic Theory of Regulation,” (with W. W. Sharkey), in *Proceedings of the Eleventh Annual Telecommunications Policy Research Conference*, 1983.

“An Analysis of Tapered Access Charges for End Users,” (with W. E. Taylor, D. P. Heyman and J. M. Lazorchak), published in *the Proceedings of the Eighteenth Annual Williamsburg Conference on Regulation*, H. Treeing (ed.), Michigan State, 1987.

Report to the Governor, The Task Force on Market-Based Pricing of Electricity. Co-authored with D. M. Sappington, Appendix III.

“Optional Tariffs for Access in the FCC’s Price Cap Proposal,” (with D. P. Heyman and W. E. Taylor), in M. Einhorn (ed.), *Price Caps and Incentive Regulation in the Telecommunications Industry*, Kluwer, 1990.

“U.S. v. Microsoft: Were the Exclusionary Practices Anticompetitive ” (with Michael J. Doane), Computer Industry Newsletter, American Bar Association, Spring 2000, Vol. 5., No. 1.

“Economic Issues in U.S. vs. Microsoft,” (with Michael J. Doane and A. Nayyar), *UWLA Law Review*, 2001.

“U.S. v. Microsoft: Is the Proposed Settlement in the Public Interest?” (with Michael J. Doane), *Computer Industry Newsletter*, American Bar Association, Spring 2002, Vol. 7., No. 1.

“Raising Rivals’ Costs: An Analysis of Barnes and Noble’s Proposed Acquisition of Ingram Book Company,” 2002, Book Chapter in *Measuring Market Power*, Edited by Daniel Slottje, North Holland (with Michael J. Doane).

Currently editing a special issue of the *Antitrust Bulletin* on vertical restraints related to pricing.

C. Books:

The Theory of Public Utility Pricing, (with S. J. Brown), Cambridge University Press, 1986. Second printing 1986. Third printing 1989.

Co-editor of *Telecommunications Demand Analysis: An Integrated View*, North-Holland, 1989.

Editorial Duties:

Associate Editor of the *Journal of Regulatory Economics*.

Unpublished Manuscripts:

“Equilibrium Exit from a Long-Term Contract,” (with S.J. Wilkie), July, 2003. Submitted to *International Economic Review*.

“Cost Asymmetries, Mavericks and Coordinated Behavior,” July 2004. Submitted to *Economics Letters*.

“The Antitrust Analysis of Bundled Loyalty Discounts,” (with P. Greenlee and D. Reitman). Submitted to the *Journal of Law and Economics*.

Other Professional Activities:

Consultant to the Governor of New Jersey’s Task Force on Market-Based Pricing of Electricity.

Referee for National Science Foundation and numerous professional journals.

Consulting for Bell operating companies on a variety of pricing and public policy issues.

Memberships: American Economic Association; listed in *Who’s Who in the East* 1990.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Reexamination of Roaming Obligations of)	WT Docket No. 05-265
Commercial Mobile Radio Service Providers)	

REPLY COMMENTS OF LEAP WIRELESS INTERNATIONAL, INC.

Attachment B

**A FURTHER ANALYSIS OF THE
WHOLESALE PRICING METHODS OF NATIONWIDE CARRIERS
PROVIDING COMMERCIAL MOBILE RADIO SERVICE**

ERS Group

January 26, 2006

Introduction and Summary

In our first paper, entitled “Wholesale Pricing Methods of Nationwide Carriers Providing Commercial Mobile Radio Services: An Economic Analysis,”¹ we described current conditions in the Commercial Mobile Radio Services (“CMRS”) industry and explained how those conditions provide nationwide carriers with incentives to adopt anticompetitive pricing practices for wholesale roaming. We recommended that the Federal Communications Commission adopt certain minimally intrusive, easily enforceable rules that would promote full competition and protect consumer welfare without hindering further development of the CMRS industry. In this paper we elaborate on a few points in our first paper and respond to the contentions of nationwide carriers that regulation is unnecessary and could distort incentives and harm consumers.

Our first paper demonstrated that, because of technological constraints, markets for wholesale roaming services are separate from retail CMRS markets and that wholesale and retail prices are independent. As we explained, it would therefore be wrong to assume that robust competition in one means that there is robust competition in the other.² We reviewed data obtained from the Commission, which demonstrate that regional carriers seeking roaming are often forced to obtain such service from one or two nationwide carriers, and that this concentration gives those nationwide carriers considerable market power.³ We explained that the nationwide carriers have incentives to exercise that power—either by forcing regional carriers to pay roaming rates that are significantly above competitive levels, or by refusing to deal with

¹ See Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, WT Docket No. 05-265, Leap Comments, Attachment A (filed Nov. 28, 2005).

² See *id.* at 4.

³ See *id.* at 4–9.

regional carriers at all—and that, ultimately, consumers suffer from such behavior.⁴ We therefore recommended that the Commission enforce an automatic roaming requirement (“ARR”) at just, reasonable, and nondiscriminatory rates; the ARR we proposed would prohibit a carrier from charging more for wholesale roaming than it charges its own customers for comparable retail services.

In their submissions to the Commission, the nationwide carriers argue that regulation of wholesale roaming markets is unnecessary, but they base their arguments on the very assumption that we have identified as flawed—that is, the nationwide carriers rely exclusively on data pertaining to the competitiveness of retail markets and fail to offer any relevant data specific to wholesale markets. In order to eliminate any confusion on the matter, we briefly highlight the fundamental differences between retail CMRS markets and wholesale roaming markets; and then, using the available data, we confirm that unregulated competition is insufficient to protect consumers from the ill effects that follow the nationwide carriers’ abuse of market power. The rules we urge the Commission to adopt would largely solve these problems.

The nationwide carriers assert that Commission intervention would give rise to a host of negative consequences, including reduced operator incentives to expand and upgrade networks and elimination of single-rate pricing plans. The nationwide carriers also contend that an automatic roaming rule would be impracticable and complicated. In this paper, we explain why the nationwide carriers’ predictions are based on (1) a misunderstanding of how an ARR would be implemented, (2) a conflation of wholesale and retail markets, and (3) highly dubious or erroneous assumptions about the conditions underlying wholesale roaming markets. In any event, we show that the potential consequences of Commission inaction are far worse. Contrary

⁴ *See id.* at 19–22.

to the suggestions of the nationwide carriers, the rules that Leap proposes and that we endorse here are narrowly targeted at the most egregious abuses of market power in wholesale roaming services markets. The rules are also easy to enforce and would allow the CMRS industry plenty of room for growth.

I. Wholesale Roaming Market Are Fundamentally Separate from Retail CMRS Markets and Are Not Fully Competitive

Dr. Gregory L. Rosston filed a report on behalf of Sprint/Nextel entitled, “An Economic Analysis of How Competition Has Reduced High Roaming Charges.”⁵ Rosston claims that an automatic roaming rule would be unnecessary and not in the public interest because “[e]conomic analysis of the wireless industry shows that the competitive market has worked extremely well for American consumers.”⁶ Rosston arrived at this conclusion by assuming that roaming services are part of a single CMRS market, rather than by evaluating the competitiveness of the wholesale roaming market separately.⁷ The nationwide carriers similarly conflate wholesale and retail markets in arguing against any roaming requirement.⁸

Rosston and all of the nationwide carriers fail correctly to apply the standard methodology used to define a market. As Dr. David S. Sibley shows in greater detail in his report attached to Leap’s reply comments, entitled “The Existence of Regional, Technology-

⁵ See Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, WT Docket No. 05-265, Sprint Nextel Comments, Attachment (filed Nov. 28, 2005) (hereinafter “Rosston Report”).

⁶ Rosston Report at 3.

⁷ See Rosston Report at 12.

⁸ See, e.g., Verizon Comments at 8 (citing the Commission’s finding in the *Tenth Annual Report*⁸ that “the CMRS industry remains highly competitive”); T-Mobile Comments at 5 (observing that since 1996 “wireless services have grown significantly and the CMRS marketplace has become highly competitive”); Sprint/Nextel Comments at 4–9 (discussing competitiveness of industry and Rosston’s conclusions); Cingular Comments at 11 (discussing the Commission’s findings in the *Tenth Annual Report*).

Specific Wholesale Antitrust Markets for Roaming Services” (hereinafter “Sibley Report”), Rosston and the nationwide carriers ignore or incorrectly apply the market definition analysis to reach the conclusion that the market is working.⁹ A correct application of the “hypothetical monopolist” test set forth in the *Merger Guidelines*¹⁰ demonstrates that there are “relevant technology-specific regional wholesale antitrust markets for voice roaming services sold to regional carriers as a group.”¹¹

Rosston claims that “[n]arrow technology-specific relevant markets would be inappropriate because a hypothetical monopolist of a specific technology in another area could not increase prices profitably in the home market by raising roaming charges. ... [H]igher roaming rates for one specific technology would lead consumers in the home market to choose other technologies.”¹² That approach to defining the market is critically misguided. Dr. Rosston tries to identify the market based on the ultimate effects that a rise in wholesale prices would have on retail consumers. The *Merger Guidelines*, however, make clear that the market definition analysis is concerned with the effect that a small but significant and nontransitory price increase would have on the buyer of the evaluated product, that is, the regional carrier purchasing wholesale roaming services. The market definition analysis is not concerned with the ultimate effect on consumers (that concern comes in later in the analysis). Therefore, as Dr. Sibley explains, “Dr. Rosston’s procedure distorts the entire market definition analysis.”¹³

⁹ See Sibley Report at 3–4.

¹⁰ See U.S. Dep’t of Justice & Fed. Trade Comm’n, *Horizontal Merger Guidelines*, § 1.11 (1997) (“*Merger Guidelines*”).

¹¹ Sibley Report at 4.

¹² Rosston Report at 13.

¹³ Sibley Report at 22.

It is worth highlighting that, in comparison to retail CMRS, wholesale roaming markets are constrained by technology because, in any particular region, CMRS carriers—the direct purchasers of wholesale roaming services—cannot substitute service provided under one technological format in response to a small but significant and nontransitory increase in the price of roaming services using a different technological format. For instance, if the nationwide carriers offering service in a particular area increase the price of roaming, a regional CDMA carrier cannot respond by obtaining roaming services from a GSM carrier or an iDEN carrier. Therefore, it does not matter for purposes of assessing the competitiveness of wholesale roaming markets how many providers of retail services there are in a particular area—what matters is how many providers offer wholesale roaming service using the same technological format.

In its order evaluating the AT&T and Cingular merger, the Commission recognized the role that technology plays in shaping wholesale roaming services markets: “[G]iven the range of handsets currently available, the number of potential roaming partners in a given geographic market is still limited by technological incompatibility and frequency bands. We note in particular that TDMA/GSM carriers do not have the ability to roam with CDMA carriers, and vice versa.”¹⁴ The Commission went on to “evaluate the competitive effects of the merger with respect to roaming services” under a technology-specific market definition.¹⁵

Our first paper evaluated the top fifty markets and showed that there were very few that had more than two providers of GSM and CDMA carriers in any particular area. The following table, which enumerates the number of providers by technology in the top 10 markets in the United States, succinctly demonstrates that provider distribution pattern.

¹⁴ *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corp.*, Memorandum Opinion & Order, 19 FCC Rcd 21522, 21589, ¶ 175 (rel. Oct. 26, 2004).

¹⁵ *Id.*, 19 FCC Rcd at 21590, ¶ 177.

TABLE ONE
TOP 10 MARKETS¹⁶

MSA	# of CDMA Networks	# of GSM Networks
New York	2	2
Los Angeles	2	2
Chicago	3	2
San Francisco	3	2
Dallas*	2	2
Philadelphia	2	2
Houston*	2	2
Washington DC	2	2
Atlanta	3	2
Detroit	2	2

As we have shown, regional carriers are often forced to obtain roaming services from one or two carriers charging supra-competitive prices, and as a result customers in the home market are forced to pay higher prices for roaming, or even to forego the ability to roam in some areas, if they choose a regional carrier's service plan. The nationwide carriers will benefit from increased market share in the home market (with a corresponding increase in subscriber revenues), while sacrificing only roaming revenues from regional carriers. The net effect, as we explained in our first report, is that a nationwide carrier will have incentives to maintain anticompetitive pricing practices because it will likely obtain greater profits from this strategy in comparison to the profits it obtains from providing roaming service to regional carriers. This concentration and difference in wholesale roaming prices charged to various providers prove that markets for wholesale roaming are separate from retail CMRS markets and are technology-specific; they also

¹⁶ These figures do not reflect that new networks may begin operating in Dallas and Houston using the additional spectrum was awarded in Auction 58.

prove that nationwide carriers have, and are exercising, market power in wholesale roaming markets.

Circumstances have continued to evolve since the recent mergers, and the Commission now has substantially more information about the competitive effects of current roaming conditions. One such change in circumstances is the movement of nationwide carriers away from their former role as net payers of roaming fees.¹⁷ Prior to the mergers, nationwide carriers often had to fill gaps in coverage by relying on regional carriers for coverage. With their expanded footprints, however, nationwide carriers' roaming payments have decreased—as have roaming prices. More important, however, the record in this proceeding includes ample evidence that nationwide carriers have adopted anticompetitive pricing practices, including discriminatory pricing and outright refusals to deal, to the detriment of consumers. Table 2, below, for example, summarizes the reported per-minute rates of wholesale roaming services from various sources in the record.

¹⁷ In fact, the Commission remarked in its *Memorandum Opinion & Order* that one of the main reasons that Cingular gave in support of the merger was the potential reduction of its roaming costs:

Cingular states that its merger with AT&T Wireless will reduce its roaming costs because Cingular subscribers will no longer have to roam in order to receive service in many areas.... By the same token, former AT&T Wireless subscribers who stay with Cingular will no longer roam in order to receive service in a number of areas....

Id., 19 FCC Rcd at 21587, ¶168.

TABLE TWO
WHOLESALE ROAMING RATES

Source	Rate/Min.	Other charges	Who Pays
ERS Filing/Leap Wireless	\$0.04 - 0.08		MVNOs
ERS Filing/Leap Wireless	\$0.28		Average roaming rate Leap pays
ERS Filing/Leap Wireless	\$0.05 - 0.10		Affiliate
iPCS-Horizon	\$0.058 -0.10		Affiliate
Blooston Law	\$0.30		Non-affiliate
NTCH	\$0.50	+\$0.15 for long distance	Non-affiliate
RTG	\$0.99		Unaffiliated midwest carrier

Table 2 demonstrates that affiliated carriers and MVNOs pay substantially less than unaffiliated regional carriers for the same service. And as explained in detail in our first report, the estimated average per-minute revenues of the nationwide providers range from \$0.023 to \$0.043 for customers using at least 1000 minutes a month.¹⁸ There is simply no plausible economic justification to explain these discriminatory roaming pricing practices, or for the charges for wholesale roaming at rates far in excess of the average retail charges (revenues collected) of the nationwide providers. The only reasonable conclusion is that nationwide carriers are abusing their market power to foreclose markets to potential competitors.¹⁹ The nationwide carriers have provided no argument or evidence to refute that conclusion.

¹⁸ See Leap Comments, Attachment A, Table 5, p. 13.

¹⁹ See *id.* at 17.

Rosston and many of the nationwide providers point to the fact that roaming rates have declined as a basis for concluding that the roaming market is competitive.²⁰ That fact, however, does not reveal anything about the competitive state of the wholesale roaming market. Falling retail roaming charges are a predictable outcome of increased consolidation and expanded footprints of nationwide carriers, and there may be other factors that have led to the general decline in retail roaming charges.²¹ For purposes of assessing competitiveness, however, the more important fact is that the nationwide carriers charge unaffiliated regional carriers more than affiliated carriers and MVNOs, notwithstanding the fact that the services nationwide carriers provide these entities are comparable. Indeed, nationwide carriers charge regional carriers more for wholesale roaming services (in some cases, ten times more) than what they charge their retail customers, despite the fact that they incur significantly lower costs in providing wholesale service (for example, they do not have to incur customer acquisition, customer care or billing costs with respect to the sale of wholesale roaming minutes). The nationwide carriers would not be able to sustain such price discrimination in the absence of market power, and the nationwide carriers have no reason for instituting such a practice but for anticompetitive aims.

²⁰ See Cingular Comments at 11; Verizon Comments at 11; Sprint Nextel Comments at 3; Rosston Report at 8–9 and Figures 2–3.

²¹ Consolidation and retail competition has led to all nationwide carriers offering one-rate plans without additional roaming charges. This does not mean that retail rates for roaming off the national carriers' networks have fallen nor does it mean that wholesale roaming rates have fallen. Verizon Wireless still charges as much as \$0.69 per minute for roaming plus \$0.20 for long-distance for customers who do not subscribe to a national one-rate plan. See, e.g., <http://www.verizonwireless.com/b2c/store/controller?item=planFirst&action=viewPlanOverview>. Other nationwide carriers may be limiting the ability of their customers to roam onto other networks, and so off-net roaming charges may never apply.

II. The Proposed Rules are Necessary, Are Easy to Enforce, and Are Beneficial for Consumers

As we discussed in our previous report, consumers are harmed by the pricing practices of the nationwide carriers discussed above in at least three ways. First, regional carriers offer services and plans not available from the nationwide carriers. For instance, Leap offers service on unique terms and conditions to many consumers who lack access to mobile wireless services offered by nationwide carriers. Because of the discriminatory pricing practices of nationwide carriers, many regional carriers cannot offer competitively priced roaming services as a complement to their specialized service features. The net effect is that the pricing practices of the nationwide carriers effectively force some consumers to choose between their preferred services and access to nationwide roaming. Second, large carriers' pricing practices and refusals to offer wholesale roaming obviously limit consumer access to CMRS services. Finally, the pricing practices of the nationwide carriers appear to be designed to restrict entry and limit competition—again to the consumer's detriment by limiting diversity, innovation, and competitive pricing.

As explained in our first report, the rules we have proposed target the specific anticompetitive practices that are demonstrated by the evidence to harm consumer welfare, and do not otherwise interfere with the ability of carriers to obtain a profit. The nationwide carriers have presented a number of misguided or misleading arguments why the Commission should refuse to enforce an automatic roaming at just and reasonable rates. In this section, we review some of the more misleading assertions of the nationwide carriers.

First, contrary to the suggestions of several nationwide carriers,²² it is simply not the case that a mandatory roaming requirement along the lines proposed here would discourage carriers

²² See, e.g., Cingular Comments at 25, 27; Sprint Comments at 20; Verizon Comments at 10.

from building out their networks and from reducing costs. A cap on wholesale prices based on average retail rates would leave carriers with ample profits, and nationwide carriers would retain any advantage they have over regional carriers from their nationwide footprint. This proposal would simply eliminate a pricing practice that is clearly not driven by competitive forces and would ensure that all carriers compete on legitimate factors, such as providing customers with the best service and at the best rates.

Second, an automatic roaming requirement would not undermine the foundation for single rate plans, as Cingular predicts.²³ For one thing, because nationwide carriers have expanded their nationwide footprints, they rely less and less upon regional carriers to fill the gaps in coverage, and therefore any negative effect that an automatic roaming requirement would have on single rate pricing would be minimal. In any event, as explained above, assuming the Commission enforced an automatic roaming rule, carriers would still have to compete as to price and service, and so long as consumers demanded single rate plans, the market would supply them. The only way that single rate plans would be negatively affected under the proposals discussed here would be if single rate plans could not be offered in a truly competitive environment, because the proposal eliminates only clearly anticompetitive pricing practices.

Finally, Dr. Rosston, along with Cingular and T-Mobile, suggest that an automatic roaming rule would be hard to implement and difficult to enforce. This is incorrect. The proposed cap on automatic roaming rates is straightforward to measure. It also defines a clear standard for enforcement purposes. This bright-line rule would also facilitate negotiations between carriers, because the parties to negotiations will have a clear understanding of the rights and obligations that the Commission will enforce.

²³ See Cingular Comments at 24.

Most important, even assuming that some of the concerns of the nationwide carriers are valid, the consequences that are likely to follow from any failure to act are worse. We have demonstrated in the first paper and here that the anticompetitive pricing practices are likely to have a significant impact on consumer choices and on the ability of regional carriers to offer unique and valuable services. The proposals would certainly have a net positive impact on the competitive environment of roaming services.

Conclusion

Many regional wholesale roaming markets are characterized by a monopoly or duopoly, with nationwide carriers wielding considerable market power. Economic principles suggest that under these circumstances nationwide carriers are likely to adopt anticompetitive practices in an attempt to foreclose the market from new entrants—and in fact the available evidence supports the contention that nationwide carriers have adopted discriminatory prices and, in some markets, have outright refused to deal with regional carriers seeking roaming service. The Commission should require every carrier to provide automatic roaming services upon request at just, reasonable, and nondiscriminatory rates, and it should prohibit wholesale roaming prices that exceed average retail rates in the same area because there is no plausible economic justification for prices above that benchmark.

The record amply supports our conclusions in the first paper and we have elaborated on a few points in this paper to dispel misleading comments of the nationwide carriers, who argue that no Commission action is necessary. The responses of the nationwide carriers as to why an automatic roaming requirement is not necessary are without foundation or are not supported by economic analysis. The proposed rule would not inhibit competition but would narrowly target a clearly anticompetitive pricing practice. The rule is easy to enforce and would provide much-

needed clarification for carriers seeking roaming agreement. Most important, an automatic roaming requirement would benefit consumers.